

A PROCESS FOR PREPARING ALKYLHYDROXYALKYL CELLULOSE

ABSTRACT OF THE DISCLOSURE

Described is a process of preparing alkylhydroxyalkyl cellulose, e.g., methylhydroxypropyl cellulose (MHPC). The process includes: (a) alkylating cellulose with an aqueous caustic solution containing from 1.5 to 5.5 equivalents of alkali metal hydroxide, e.g., NaOH, per anhydroglucose unit (AGU) of said cellulose, in the presence of a suspension agent, e.g., dimethyl ether, which contains alkyl halide, e.g., methyl chloride, in an amount of from (equivalents of alkali metal hydroxide per AGU minus 1.4) to (equivalents of alkali metal hydroxide per AGU plus 0.8); (b) reacting the alkali cellulose of step (a) with one or more alkylene oxides, e.g., propylene oxide, at a temperature higher than 65°C, e.g., 85°C; (c) adding alkyl halide, to the product of step (b), in an amount of at least the difference between (i) the equivalents of alkyl halide per AGU in step a) and (ii) the equivalents of alkali metal hydroxide added per AGU in step (a), provided that the amount of additionally added alkyl halide is at least 0.2 equivalents per AGU; and (d) isolating alkylhydroxyalkyl cellulose from the reaction mixture of step (c). Optionally the isolated alkylhydroxyalkyl cellulose may be purified.